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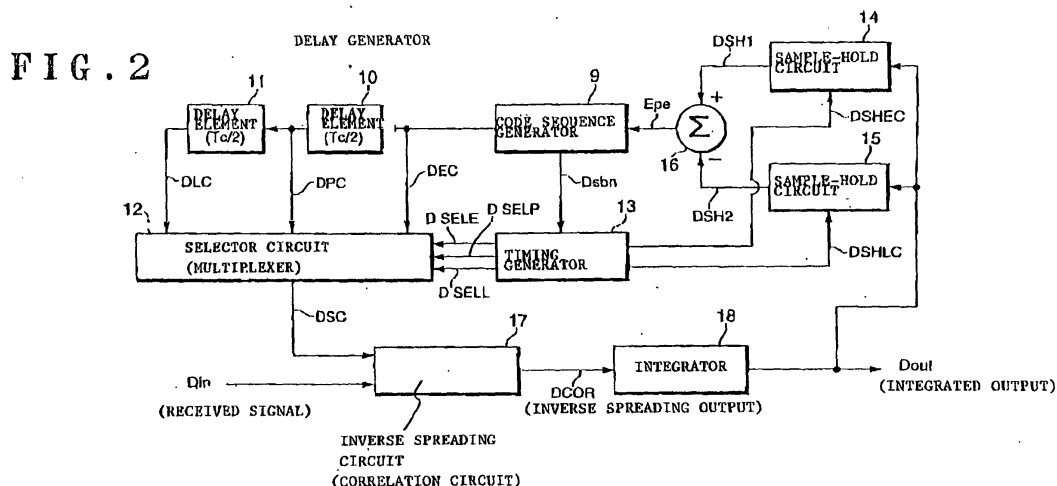
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(54) **Code synchronization in a receiving device for spread spectrum communication systems**

(57) A receiving device is provided with a DLL circuit of a reduced scale. An inverse spreading processing to ensure the synchronism with a received signal and a processing to inversely spread original data in the received signal are performed by a time-sharing operation using one inverse spreading circuit (17) and one integrator (18). During a period in which synchronous data for detecting a slot duration included in the received signal is received, the synchronous data is alternately inversely spread by an early code and a late code and

sample-hold circuits (14,15) alternately sample and hold the integrated output. Further, based on the difference (error signal) between sample-hold signals, the early code, the late code and a reference code outputted from a code sequence generator (9) are synchronized with the received signal. Then, the inverse spreading circuit and an integrator inversely spread the original data in the received signal based on the synchronized reference code and a detection output is generated by integrating the inverse spreading output.





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EUROPEAN SEARCH REPORT

Application Number
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Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
A	GB 2 340 002 A (FUJITSU LTD) 9 February 2000 (2000-02-09) * abstract * * page 16, line 4 - page 17, line 19 * * figures 1,22 *	1-8	H04B1/707
A	US 4 567 588 A (JERRIM JOHN W) 28 January 1986 (1986-01-28) * column 15, line 50 - column 16, line 18 * * figure 11 *	1,3-5,7,8	
			TECHNICAL FIELDS SEARCHED (Int.Cl.7)
			H04B
The present search report has been drawn up for all claims			
Place of search		Date of completion of the search	Examiner
The Hague		30 September 2004	Amadei, D
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

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**ANNEX TO THE EUROPEAN SEARCH REPORT
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This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
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